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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/441,341	11/16/1999	KENNETH SCHOFIELD	DON01-P-770	4190

28101 7590 10/02/2002

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EXAMINER

ALLEN, STEPHONE B

ART UNIT PAPER NUMBER

2878

DATE MAILED: 10/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/441,341

Applicant(s)

SCHOFIELD ET AL.

Examiner

Stephone B. Allen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed on 3/6/02.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 54-99 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 89-93 and 99 is/are allowed.
- 6) ☒ Claim(s) 54-59, 61-64, 66, 67, 84-86, 94 and 98 is/are rejected.
- 7) ☒ Claim(s) 60, 68-83, 87-89 and 95-97 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Applicant's attention is directed to the claim for priority extending back to the application serial no. 08/023,918 filed 26 February 1993. Since 08/621,863 is a CIP of the application, and the portion of this application that supports the interference is not found in the parent application, applicant is only afforded priority back to the filing date of the 08/621,863 application.

Examiner acknowledges receipt of the amendment filed on 06 March 2002. The amendment attempted to present claims directed to those of Reexam application 90/005,439. However, though some of substantially the same, all of the claims are neither an exact replication of the confirmed Reexam claims nor do they encompass the same scope of the confirmed Reexam claims. Those claims are not considered patentable over the prior art and a rejection of those relevant claims is found below. Further, to simplify issues when presenting claims for provoking an interference with the Stam et al. patent, it is suggested that applicant cancel the dependent claims and only pursue the independent claims during the interference determination process. Then, if applicant prevails in the interference, applicant can then reintroduce those claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 54-57, 59, 61-~~65~~, 94 and 98 are rejected under 35 U.S.C. 102(a) as being anticipated by JP 08166221 to Suzuki.

Regarding claim 54, Suzuki discloses a control system for automatically controlling the state of the headlamps of a controlled vehicle (Abstract and Fig 2), the control system comprises an optical system for imaging external sources of light within a predetermined field of view (page 7, and camera 11, Fig 2); and an image processing system for processing images from the optical system and providing a control signal for controlling the state of the headlamps as a function of the relative output of pixels imaging the same spectral band of light (pp 7-8, and headlight switching signal 43, Fig 3). Also, since all of the pixels in Suzuki receive light in the same spectral band, the control signal is a function of the relative output of pixels imaging the same band of light. The predetermined field of view is shown to the field of view of the camera.

Regarding claims 55-57, Suzuki discloses that the optical system is configured to image light sources over a predetermined horizontal and vertical range defining the predetermined field of view recited in claim 55, that the optical system is fixed in relation to the controlled vehicle as recited in claim 56, and that the optical system includes an image array sensor containing a plurality of pixels as recited in claim 57.

Regarding claims 59 and 98, the housing/lens structure inherent in the camera of Suzuki provides means for baffling light outside the predetermined field of view.

Regarding claims 61-65, Suzuki discloses an image processing system that processes images on a frame by frame basis and examines various frames in order to detect the motion of various light sources relative to the controlled vehicle as recited in claim 61, that the image processing system compares successive frames to detect vertical motions of the light sources relative to the controlled vehicle as recited in claim 62, that the light sources are overhead street lamps as recited in claim 63, that the image processing system compares successive frames to detect horizontal motion of the light sources relative to the controlled vehicle as recited in claim 64, and that the light sources are reflected lights from stationary reflectors relative to the controlled vehicle as recited in claim 65.

Regarding claim 94, Suzuki discloses a control system for automatically controlling the high beam state if the headlamps of a controlled vehicle comprising an optical system for imaging external sources of light within a predetermined field of view onto an image sensor containing a plurality of pixels, the optical system configured to selectively transmit one or more predetermined spectral bands of light, and the optical system configured to image light within each predetermined spectral band onto predetermined blocks within the image sensor; and an image processing system for processing images from the optical system and providing a control signal for controlling the high beam state of the headlamps as a function of the output of one or more pixels within each of the predetermined blocks, relative to the output of other pixels with the same block. Specifically, Suzuki teaches only one of the one or more predetermined spectral bands of light.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 66-67, 84-86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki.

Regarding claim 66, while Suzuki fails to teach a means for filtering infrared light from the external sources of light, it would have been obvious to incorporate infrared filtering because it is well known in the filter out unwanted or unneeded light to improve the detection of light from sources of interest.

Regarding claim 67, while Suzuki fails to teach that the optical system includes two or more lenses, it would have been an obvious design modification to incorporate two or more lenses to focus the field of view onto the camera because focusing light onto a pixel array using a plurality of lenses is notoriously old in the art.

Regarding claims 84-86, while Suzuki discloses a control signal to switch the headlights from a high beam to a low beam, other alternative methods of reducing the light of the headlights, such as turning the high beam headlamps completely on/off, continuously varying the brightness level of the high beam lamps between completely on/off, and varying the duty cycle of the headlamps, would have been obvious alternatives to one of ordinary skill in the art because methods are notoriously old in the art.

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Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Fossum et al. (US 5471515, hereinafter Fossum).

Suzuki discloses the control system as discussed above, but fails to teach that the pixel image array sensor is a CMOS active pixel image array sensor. Fossum discloses a pixel image array that is a CMOS active pixel image array sensor. It would have been obvious to one of ordinary skill in the art to substitute the CMAs active pixel array image sensor of Fossum into the control system of Suzuki to decrease the cost of the system since Fossum discloses that such sensor are extremely inexpensive (col. 4, line 62).

Claims 60, ~~62~~, 68-83, 87-89, and 95-97 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 89-93 and 99 are considered allowable over the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephone B. Allen whose telephone number is (703) 308-4828. The examiner can normally be reached on M-Th from 9-4..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 or 7724 for regular communications and (703) 308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



STEPHONE ALLEN
PRIMARY EXAMINER

sba
October 1, 2002